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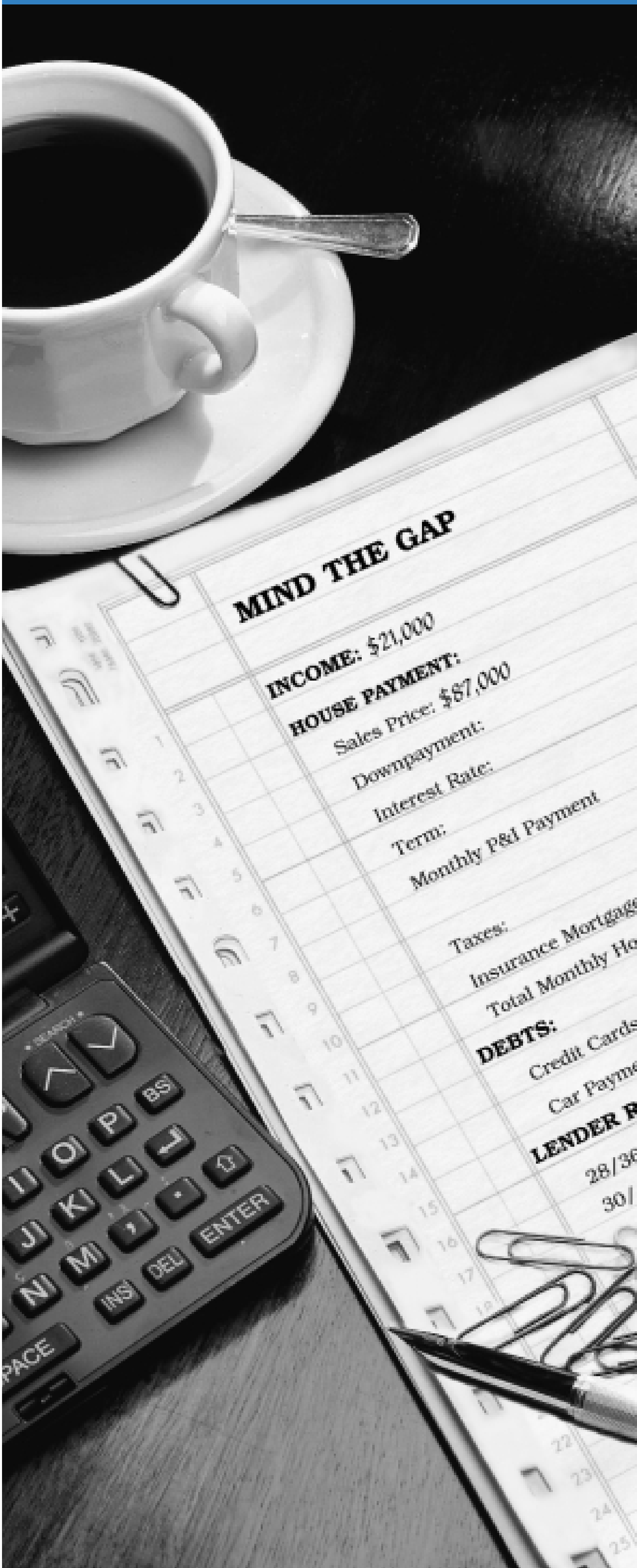

Mind the Gap:

Issues In Overcoming the Information, Income, Wealth, and Supply Gaps Facing Potential Buyers of Affordable Homes

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GENTRIFICATION: PRACTICE AND POLITICS

MORTGAGE LENDING TO MINORITY AND LOW-INCOME HOME BUYERS IN THE 1990S: UNDERWRITING CHANGES, AUTOMATED UNDERWRITING AND SUBPRIME LENDING

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Abstract

While the overall homeownership rate in the United States is at an all-time high, the gap between the ownership rates of low-income- and higher-income households remains wide. In addition, homeownership rates in urban, low-income and minority communities lag behind. Lower-income families are constrained a lack of information about how to buy a home, by their inability to provide sufficient, stable income streams for debt service, by their lack of initial equity, and by their inability to find an home of adequate quality in a desirable location. This paper explores each of these constraints, or gaps, and potential solutions for each. We find addressing each of these gaps involves trade-offs, yet targeting the appropriate strategy for particular markets and populations may be able to help families become home owners.

Information gaps are best addressed by programs that provide home buyer counseling and education. Federal funding and incentives for such programs have been declining throughout the last decade, however. Unless new homebuyers are well-prepared and supported, none of the sophisticated development and financial strategies will be successful. Income and wealth gaps are closely linked; bridging a wealth gap for a buyer, for example, may increase the buyer's income gap. While there are several strategies that seek to bridge these twin barriers, the most promising among them is the second mortgage. The supply gap is most pressing in faster-growing coastal cities, but is becoming a more significant constraint to homeownership nationally. Unfortunately, reliance on filtering and other traditional mechanisms for creating affordable homeownership opportunities has not proven effective in recent years. Serious consideration should be paid to new production programs and policies that can enhance the supply of affordable owner-occupied units in targeted areas. Overall, a menu of strategies exists, each being appropriate for targeted households in a given housing market context. More attention needs to be focused on this menu, rather than a one-size fits all strategy.

Introduction

While the overall homeownership rate in the United States is at an all-time high, the gap between the ownership rates of low-income and higher-income households remains wide, as does the gap between central cities and suburbs and also minorities and whites. Lower-income families are constrained by a lack of information about how to buy a home, by their inability to provide sufficient, stable income streams for debt service, by their lack of initial equity, and by their inability to find an affordable home of adequate quality in a desirable location. This paper explores each of these constraints, or gaps, and potential solutions for each.

The Fannie Mae National Housing Surveys (1995-1997) find that more than three out of four households would prefer to own their home rather than rent it. Evidence is also mounting showing homeownership has positive influences on families, neighborhoods and the economy. Research indicates that people who live in owner-occupied housing create stable, nurturing home environments, as well as feel better about themselves and how and where they live. Green and White (1994) found that the children of home owners are less likely to become involved in the justice system, drop out of school or have children out of wedlock. Rossi and Weber (1996) found owners have slightly more positive indications of life-satisfaction and self-esteem.

DiPasquale and Glaeser (1997) found homeownership is correlated with membership in community organizations and voting. Rohe and Stewart (1996) found an association between homeowning and improved property maintenance. Boehm and Schlottmann (1999) found children of homeowners are more likely to own a home within 10 years after moving from their parent's household than similar children of renters, as well as more likely to graduate from high school and college.

The wealth building aspects of homeownership are particularly important for lower-income, working families.[1] Tabulations of the 1995 Survey of Consumer Finances show home owners under age 65, with income 80 percent or less of median area, have $57,060 in net wealth. Renters under 65, in the same income group, have a median net wealth of $4,930—1/12th the level of comparable owners. Beyond its social and political benefits, homeownership can create economic benefits by generating economic activity for the broader community (Emrath 1997; Collins, Belsky and Tripathi 1999).

While homeownership rates are at all-time highs nationally, higher-income families are much more likely to own homes than lower-income families *(Table 1)*. Only 48 percent of very-low-income households live in owner-occupied homes, as opposed to 67 percent of all households, and 88 percent of high-income households. Moreover, homeownership rates are lower in central cities across all income groups. Overall, there is a 17-percentage point difference between central city and suburban homeownership rates.[2] As a result, many programs seeking to increase the number of low-income homeowners focus on urban areas. Homeownership rates for whites, recently estimated at 72 percent, are 34 points higher than for minorities (currently at 48 percent ownership).[3]

The U.S. Department of Housing and Urban Development (HUD) estimates that if the gap between higher and lower-income homeownership rates were cut in half, the national homeownership rate for all households would rise to 74 percent (Eggers and Burke 1996). Galster, Aron and Reeder (1999) estimate that 5 million renters could potentially buy a home, half of whom are low-income. The authors suggest outreach, enhanced fair lending practices, liberalized loan products and an increased supply of affordable owner-occupied units will help ease these renters into homeownership.

Table 1

HOMEOWNERSHIP RATES BY INCOME

Percent of Households Owning a Home

Income as Percent of Area Median Income

	Very Low Income (Less than 50%)	Low Income (51% to 80%)	Moderate Income (81% to 120%)	High Income (Over 120%)	All Households
All Areas	**48%**	**59%**	**72%**	**88%**	**67%**
Central City	**31%**	**45%**	**59%**	**80%**	**50%**

Source: 1999 American Housing Survey (preliminary release)

Note: Quarterly rates released by the U.S. Department of Housing and Urban Development are based on the Current Population Survey for more recent periods.

1 Also, the median ratio of total wealth to housing wealth for low-income owners under 65 in 1995 was 65.7. It is important to remember that owners may lose money on any one home purchase, depending on the timing of purchase and sale. Nevertheless, these data show over a lifetime homes are a powerful store of wealth.

2 Herbert (1997) described several factors that contribute to the homeownership gap between cities and suburbs, including racial discrimination and segregation, a lack of urban single-family detached housing units, a lack of creditworthiness.

3 Tabulations of Current Population Survey released by U.S. Department of Housing and Urban Development, 2000.

The Information Gap

The obstacles to homeownership for lower-income, minority and immigrant families are numerous; these include: limited cash for down payments and closing costs; no credit history or past credit problems; mortgage products that do not meet their needs; "affordable homes" needing significant rehabilitation after purchase; lack of information, confusion or even fear about the home buying process; and lack of understanding about money management, home maintenance and post-purchase responsibilities. Thus, it is not enough to develop (as many lenders have) very aggressive loan products or to offer (as many other non-profits or local government agencies do) deep subsidies or incentives for low-income homebuyers or to provide home-owner education as an afterthought. The information gap must be addressed head-on and as the first step in the process. The hard work of developing appropriate financial products and developing affordable units will be wasted unless families are prepared for sustainable homeownership.

Low- and moderate-income consumers often lack relationships with mainstream institutions; for example, 44 percent of African-American renters under $40,000 income do not have banking relationships. Nationally, 12 million households in the U.S. are "unbanked:" 80 percent of these households have incomes under $25,000; over 50 percent are non-white (Federal Reserve 1998). The lack of a banking relationship often prevents these households from even considering buying a home.

The lack of basic financial management skills can also be a serious barrier to households wanting to purchase a home. Without a budget and sound financial goals, a renter household can fall prey to easy consumer credit offers, eroding savings and falling deeply into debt.

There is evidence to suggest that a significant segment of potential buyers self-select out homeownership out of fear of rejection, confusion about the complexities of the process or misunderstandings about their financial status (Ratner 1996). Even with financial resources, minority and low-income renters may be discouraged and lack the confidence to buy a home. A survey of "Consumer Knowledge and Confidence" (Freddie Mac, 1997) revealed that only 49 percent of African-Americans with "good" credit think their credit "is good." In the same survey, in response to the statement "I am in control of my finances," 76 percent of prime borrowers strongly agreed with the statement while only 57 percent of subprime borrowers agreed.

The historical legacy of institutional discrimination may also affect many minority applicants. Minority mortgage applicants continue to be rejected at much higher rates than white applicants. According to 1999 Home Mortgage Disclosure Act (HMDA) data, conventional home purchase loan denials rates were 15 percent for white applicants, 25 percent for Hispanic applicants and 37 percent for African-American applicants. Only five percent of white applicants were rejected for credit problems, while 46 percent of black applicants were rejected for those reasons.

Bridging the Information Gap

Counseling and homeowner education has been given much support by the housing finance industry over the past decade and while there is much anecdotal support for the work, until very recently, there was little empirical data that documented its effectiveness beyond a marketing and outreach strategy.

One of the reasons for the lack of good research on the topic is highly fragmented nature of counseling practitioners ranging from lenders to nonprofits, from mortgage insurance companies to faith-based organizations. Also, until recently, few standards or definitions existed in the counseling industry. In 1999, the American Homeowner Education and Counseling Institute (AHECI), a collaboration of over 35 housing finance industry organizations, adopted a standard curriculum, a standard set of definitions and minimum requirements for homeowner education and counseling. Until that time, so-called homeowner education or counseling sessions, even those required by Fannie Mae and Freddie Mac for their affordable housing loan products, could vary from 1 hour to 36 hours in length. The methodology could range from intensive one-on-one sessions, group workshops, telephonic sessions or even home study work.

Despite this diverse range of practitioners, lack of standards and little quality control, counseling efforts were acknowledged as being valuable as building partnerships or marketing and outreach tools to expand the market to new potential buyers, particularly to inner-city, minority, lower-income, immigrant or female customers (Listokin and Wyly 2000). According to a recent report from McCarthy and Quercia (2000), homeowner education and counseling efforts can:

- provide low cost information and consumer outreach;
- reach underserved markets by bridging cultural and language barriers;
- help mortgage lenders and GSEs meet their regulatory requirements; and
- develop "mortgage-ready" consumers.

Counseling efforts are able to bridge part of the information gap by connecting with households:

- that may be unaware they are capable of buying a home (through outreach to community groups or employers);
- with significant cultural or language barriers (by providing training and materials in appropriate language or building partnerships with citizenship, English as a Second Language or refugee programs);
- that are confused or intimidated about the complexities of homebuying process (through "lunch and learn" classes, orientation sessions or HomeOwnership Centers);
- that have self-selected out of homeownership because of poor past experiences with lenders (through individual counseling and partnerships with churches, employers and referrals from friends); and
- that have credit problems or lack of savings (by helping build money management skills through FasTrak classes or HomeBuyers Clubs).

By working with churches, employers, and other grass roots organizations, counseling and outreach can be very effective at reaching customers who have traditionally been shut off from contact with conventional financial services.

While lenders, even aggressive affordable housing lenders, have been able to make inroads into underserved markets, they have, for the most part, only reached the tip of the iceberg—families who are "near conventional" or "near-ready" for homeownership (that is, those who can buy a home within three to six months). A much larger market exists for families who, with some assistance and counseling over a 6 to 18 month period, can save money, establish or repair credit, work through other issues to be able to purchase a home.

One approach, pioneered over the past seven years by the NeighborWorks® network of community-based nonprofits, has been called NeighborWorks® Full-Cycle Lending℠. It is a systematic approach undertaken to reach underserved families with homeownership by reaching out to potential buyers in convenient and culturally-sensitive ways; by attracting them to participate in homeowner education training and counseling programs; by building their capacity through building life skills in financial management and home maintenance; by aiding families to become more informed "smart shoppers;" by helping families establish credit or repair credit problems; and by encouraging savings for down payment and closing costs. The counseling components of Full-Cycle Lending℠ are intensive, face-to-face and interactive.

Until recently, there no empirical research has documented the role of homeowner education and counseling in reducing the borrowers' risk of becoming delinquent on their loans. The first critical research paper on this topic is soon to be to released by Freddie Mac, based on a study of 40,000 mortgages originated under their Affordable Gold lending program. This study may finally provide data showing what practioners have long suspected—that appropriate counseling mitigates risk and reduces loan delinquencies.

While there is need for more research on this topic, it is becoming clearer that homeowner education and counseling can not only close the information gap, helping reach expanding markets for homeownership, but can also mitigate the risk of these borrowers defaulting on their loans.

The next logical question is how the industry can support sustainable funding and capacity building for the valuable services of home buyer education and counseling. As part of its recent rate reductions, FHA now no longer offers a premium discount for buyers who attend counseling sessions, Meanwhile, U.S. Department of Housing and Urban Development funding for housing counseling serves only 20,000 to 25,000 families annually, with a meager budget of $20 million. It seems somewhat incongruous that FHA incentives for counseling have recently been eliminated and HUD funding levels are so low. If studies continue to show the efficacy of counseling and education, it will further beg the question of whether homeowner education and counseling should be required for all first-time homebuyer transactions through FHA, Freddie Mac and Fannie Mae.

FasTrak Homebuyer Education Classes

Chattanooga Neighborhood Enterprise (CNE) has developed a high-volume homebuyer education program geared to families who are "near-ready" for home ownership. That is, their "FasTrak to Home Ownership" classes are intended for potential buyers who have already saved enough for down payment and closing costs and do not have credit problems. The classes (in one or two sessions) are offered every week and are eight hours in length, with individual counseling sessions provided afterwards. Graduation from the class is required for special financing from CNE. Many local lenders, who have noticed that buyers trained by CNE are better prepared than other buyers, also require participation in CNE's accalimed program. CNE also offers a "Life Skill" class for potential buyers who need longer-term assistance to prepare for home ownership.

The Income and Wealth Gaps

Table 2, also displayed graphically in *Figure 1*, highlight two of the gaps facing low-income homebuyers, a lack of income and a lack of liquid assets, by the four major Census regions in 1999. Based on a home priced at one-half of the regional median price, a family in the West needs to earn nearly $36,500. Yet, half of the median income in the West is only $27,000, over $9,000 less than needed to afford a home. Even households that might have this level of income, still must have access to over $4,000 in cash to cover downpayment and closing costs—16 percent of their income. These trends are similar in all regions, with wealth gaps smallest in the South.

Linneman et al (1997) describe these two gaps as being driven by mortgage underwriting policies. As lenders ration credit by relative default risk, they require maximum ratios of income to housing costs (so called "front-end" ratios) and income to total debt load ("back end"), thus limiting the total amount borrowed by a household. Likewise, lenders also ration credit based on relative collateral risk, and as such limit total loan to home value ratios.

The Census estimates that in 1995, 10 percent of all renters, and 4 percent of renters earning less than $20,000, could not afford a house selling for half of the regional median house price. A third of renters in 1995 could afford monthly payments but were prevented from buying a home because they lacked the wealth to cover down payment and/or closing costs. Only 3 percent were constrained only by income. The other two-thirds of renters who could not afford to buy a modestly priced home were prevented by a combination of inade-

Table 2

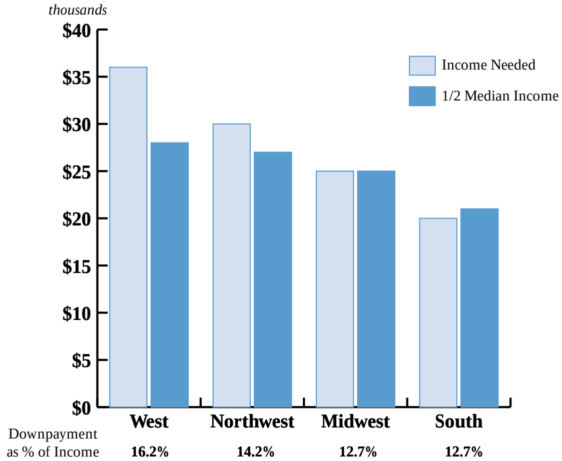
INCOME AND WEALTH GAPS BY REGION, 1999

	West	Northeast	Midwest	South
50% of Median Sale Price#	$97,000	$79,000	$65,000	$53,000
Downpayment (3%)	$2,910	$2,370	$1,950	$1,590
Closing Costs (1% plus $500)	$1,470	$1,290	$1,150	$1,030
Mortgage Amount (30 year fixed)	$94,090	$76,630	$63,050	$51,410
Principal & Interest (8%)	$690	$562	$463	$377
Mortgage Insurance (0.38%)	$30	$24	$20	$16
Taxes and Insurance (2%)	$162	$132	$108	$88
Total Payments	$882	$718	$591	$482
Affordable Income (29% Ratio)	$36,491	$29,719	$24,453	$19,938
50% of Median Income #	$27,000	$25,832	$24,400	$20,609
Remaining Income Gap	$9,491	$3,887	$53	N/A
Cash Needed for Closing	$4,380	$3,660	$3,100	$2,620

Source: 1999 American Housing Survey

Figure 1

INCOME NEEDED TO BUY A HOME PRICED HALF OF MEDIAN PRICED HOME, COMPARED TO HALF OF AREA MEDIAN INCOME



quate wealth (they could not afford down payments and closing costs) and lack of income (they could not afford the monthly mortgage payments) (Savage 1999). *Table 3* and the accompanying figure show these data.

Table 3

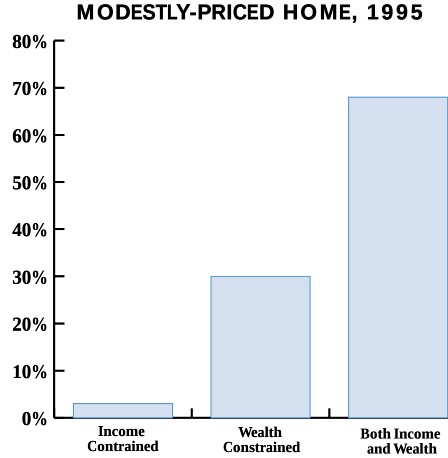
REASON MODESTLY PRICED HOME CANNOT BE AFFORDED: UNITED STATES, 1995

Thousands of Households

	All households who cannot afford to buy	Percent	Renter household who cannot afford to buy	Percent
Wealth Constrained	**9,953**	**32%**	**5,672**	**30%**
Income Constrained	**4,382**	**14%**	**609**	**3%**
Both	**16,369**	**53%**	**12,590**	**67%**
Total	**30,704**	**100%**	**18,871**	**100%**

Source: U.S. Bureau of the Census, <http://www.census.govhhes www.hsgaffrd.html> Table 3-5

WHY FAMILIES CANNOT AFFORD A MODESTLY-PRICED HOME, 1995



Several studies have verified the trends shown in *Table 3*. Gyourko, Linneman and Wachter (1999) found that this trend was consistent using separate data and another methodology. Wachter and Megbolugbe (1992) find much of the gap in accumulation of wealth is based on "endowment factors," such as education, age and family type. Haurin, Hendershott and Wachter (1996) also found wealth to be the greater gap facing potential low-income homebuyers. Quercia, McCarthy and Wachter (1999) found changes in the amount of wealth required to purchase a home to be three times as significant as changes in interest rates. Linneman et al (1997) found increasing maximum loan-to-value ratios to 95 percent, and also mortgage debt to income ratios to 33 percent would increase homeownership rates by 3 percent.

In general, these trends ought to make sense to the casual observer. It is expected that a household must have a sufficient income in order to be able to defer some portion of consumption into savings for down payment and closing costs. Thus, it is more likely a household would have overcome income gaps by the time they have accumulated a sufficient downpayment.

Lower-income renters are at a disadvantage in accumulating cash to cover downpayment and closing costs. In order to accumulate wealth, households must consume less and save more or they must receive inheritances or cash gifts from relatives or other benefactors. The average first-time home buyer under 35 years of age, for example, takes 2.8 years to acquire enough assets to afford to buy a home, an unreachable achievement for most low-income families. Typically, 10 percent to 20 percent of the average first-time buyer's downpayment funds come from gifts (Englehardt 1997; Englehardt and Mayer 1998; Haurin, Hendershott and Wachter 1996). Yet, low-income households generally have to spend most of all of their small incomes for basic needs such as shelter, health care and food, leaving little for savings. In addition, due to the intergenerational nature of poverty, low-income households are also less likely to receive downpayment assistance from family members than other households (Englehardt and Mayer 1998).

Aware that many families lack enough wealth to fund a downpayment of 10 percent or more of the house price, the mortgage industry has recently begun lowering downpayment requirements to 1 percent, or even less. While the mortgage industry is reaching out to families who are constrained from affording a home by wealth alone, lowering downpayment requirements may only make income constraints worse by adding to the mortgage amount and increasing mortgage insurance premiums.

Lowered downpayments can make homeownership possible for some low-income buyers, but lenders rightly perceive these loans to be a higher collateral risk than loans with lower loan-to-value ratios. The lender has less of a cushion in the event of a decline in house prices and the borrower has little to lose by walking away from property if the value of the home falls below that of the outstanding mortgage. As a result, the default costs of low-downpayment loans are assumed to be higher than other loans. To protect themselves, lenders require mortgage insurance, which raises the monthly carrying costs of owning a home. As a result, the income constraint of homeowning can become a binding factor that keeps low-income families from being able to afford a home. In the first five years of a typical low-value mortgage, a borrower may have to pay an additional $3,000 in monthly payments by using mortgage insurance *(Table 4)*. Also, buyers still must have enough wealth saved for closing costs and other fees, which may be more than 5 percent of the house price.

Even the Federal Housing Administration (FHA) single-family mortgage insurance program, which has been extraordinarily effective in assisting underserved families to become homeowners for the past 65 years, like any mortgage insurance, increases monthly payments and debt ratios. Another innovation in the mortgage finance industry, the adjustable rate mortgage (ARM), helps borrowers to overcome gaps in income affordability, but in the process shifts the risk of changes in interest rates from the lender to the borrower.

Bridging Income and Wealth Gaps

Solutions to the income and wealth gaps faced by low-income renters wishing to buy a home must carefully balance trade-offs that increase collateral, interest rate and default risks. Various target populations, and housing market require a different mix of strategies. Younger white, low-income households will have different needs than minority, moderate-income households, who, in turn, have different needs than immigrant households. Cities with higher land and housing costs also will require different strategies than markets with lower costs.

Mortgage Interest and Real Estate Tax Deductions: Often cited as an incentive to homeownership, the mortgage interest and real estate tax deductions reduce a homebuyer's total federal taxes, increasing the amount of income that can be devoted to a mortgage. However, these deductions do not lower the wealth needed to cover downpayments and closing costs. Moreover, tax deductibility does virtually nothing to help low-income families buy or own a home. Most low-income families do not itemize their tax deductions and do not receive any benefit from the mortgage interest or real estate deduction. Over 90 percent of the total benefits of the mortgage interest deduction accrue to homeowners with more than $40,000 in annual income (Greene and Reschovsky 1997).

Tax-Exempt Finance: Mortgage Revenue Bonds (MRBs) are tax-exempt bonds issued by state housing agencies. The size of the program is limited by a "private-activity," tax-exempt bond volume equal to the greater of $150 million per state or $50 per capita.[4] The $9 billion in capital raised from floating these bonds each year is used to issue below-market interest rate loans to borrowers with incomes below 115 percent of the area median (140 percent of median in some areas). By lowering the monthly carrying cost of mortgages, MRBs help first-time buyers overcome their income constraints. Approximately 66,000 of the 104,000 MRB-funded mortgages issued in 1997 went to homebuyers with incomes at or below 80 percent of the local median (NCSHA 1998). MRBs also can help buyers overcome a lack of

Table 4

SAVINGS WITHOUT MORTGAGE INSURANCE

	No Downpayment	Cash Downpayment
Lender Yield	**7.05%**	**7.05%**
Service Fee	**0.25%**	**0.25%**
Mortgage Insurance	**0.54%**	**0.00%**
Total Rate to Borrower:	**7.84%**	**7.30%**
Example Mortgage Value	**$50,000**	**$45,000**
5 Year Interest Cost	**18,466**	**$15,473**
Savings to Buyer	**0%**	**($2,993)**

Assume 30 year fixed rate mortgage
Source: Authors' calculations

[4] Legislation has been introduced to increase the per capita amount.

downpayment and closing costs. About 39 percent of MRB loans in 1997 required downpayments of 3 percent or less (NCSHA 1998). However, when MRB-funded mortgages ease downpayment requirements, these loans often require the payment of mortgage insurance, which, as discussed above, raises the effective interest on the loan and increases the income gap.

State housing agencies that issue MRBs can also convert MRB issuing authority into mortgage credit certificates (MCCs). MCCs provide first-time homebuyers with a nonrefundable income tax credit of 10 percent to 50 percent of the borrower's annual mortgage interest payments (up to $2,000 annually). Like MRB's, MCCs lower the monthly carrying costs of homeowning. An MCC worth 25 percent of a house price creates an interest subsidy equal to an average MRB-funded mortgage loan. Rather than creating a subsidy that reaches buyers through reduced interest rates, MCCs provide tax credits directly to buyers of owner-occupied housing, reducing their annual tax liability. While allocated by state housing agencies, MCCs do not require access to debt or equity markets. Typically, buyers receive credits directly from state housing agencies after qualifying for a mortgage from a conventional lender. As a result, the administrative costs of MCCs are low.

Only 15 states participated in the MCC program in 1997, issuing only 5,600 certificates (NCSHA 1998). MCCs are not more widely used for several reasons. First, low-income families often have a limited level of tax liability, particularly given other tax credits available, such as the earned income tax credit and child care tax credit. Since the MCC is not refundable, any amount of the credit exceeding the taxpayer's total tax bill does not result in a larger tax refund and is instead foregone. A second reason MCCs are rarely used is that a state's use of MCCs counts against the amount of bonds it is permitted to issue. By using MCCs, states forego an opportunity to earn revenue from the difference in interest rates (or "spread") between tax-exempt bonds and mortgage loans produced by MRBs. Finally, MCCs are often not used because lenders and buyers do not understand how to use the low-volume program.

Downpayment Assistance: There are several strategies that can help ease wealth constraints by subsidizing downpayment and closing costs with a grant or forgivable loan. These strategies reduce entry costs, but not monthly payments, unless they pay down significant portions of outstanding mortgage principal. Such a subsidies are often structured to be recaptured upon re-sale, depending on the household's income, or designed to share a portion of any appreciation with the funder. In general, these are expensive, lump-sum subsidies, without much recycling of funds. Two promising approaches are Individual Development Accounts (IDAs) and lease-purchase ownership. IDAs are a form of matched savings, often linked to financial literacy programs. Over time, a family will accumulate enough savings in an IDA to pay for downpayment and closing costs. Lease-purchase allows a family to move into a home in the short-run as a lease-hold tenant. Each month a portion of the family's lease payment is used to accrue a sufficient downpayment. At some point in the future, the household can convert from leasing to fee-simple ownership. However, since lease-purchase requires a property manager for some period of time (typically 1 to 2 years), these programs can be administratively cumbersome.

Direct Mortgage Subsidies: The U.S. Department of Housing and Urban Development (HUD) has recently begun experimenting with programs such as allowing tenants to use Section 8 rental subsidies to pay a mortgage when buying a home. By applying housing vouchers to the mortgage payment, very-low income households receive a subsidy for the difference between 30 percent of income and the total housing payment. Only a handful of buyers have used this very new program as of 2000, but few other homeownership strategies have the potential to serve very low-income populations. Buyers still confront, of course, gaps in their ability to produce a downpayment, since a cash contribution from the buyer is required. Regulations allow vouchers to be used for 10 years for loan terms of less than 15 years and for 15 years for loan terms of 20 years or more (this restriction does not apply if elderly/disabled). It is still unclear if vouchers will be treated as income for the purposes of mortgage underwriting. Most of the home buyers using Section 8 for homeownership thus far pay a first mortgage with their earned income, and use the voucher for debt service on a second mortgage held by a community lender. Nonprofit organizations can play a key partnership role with public housing agencies by providing pre- and post-purchase counseling and low-cost second mortgage capital. Similar subsidies exist through the application of public assistance or the Earned Income Tax Credit (EITC) to mortgage underwriting, although the longer-term of Section 8 support makes it advantageous.

Second Mortgages: A second mortgage, also called a "piggy-back mortgage" can simultaneously reduce size of the first mortgage, and overcome wealth gaps. A second mortgage at loan-to-value ratios below the level that requires mortgage insurance (typically 75 to 80 percent) can both reduce the lender's collateral risk (as there is greater chance of recouping its smaller loan through selling the house at foreclosure), as well as reduce the borrower's monthly debt service costs, overcoming income gaps.

Second mortgages are popular vehicles for borrowers, particularly low-income families lacking the wealth to buy a house. *Table 5* shows the use of these loans varies by market, but that first-time buyers are most likely to use second mortgages in higher cost markets. This mortgage is secured by a lien on the property, but in a second position behind the first mortgage. Because the second mortgage holder receives proceeds from a foreclosure only after the first mortgage is paid off, these loans are perceived to be a higher risk to lenders, and require higher interest rates. Of course, higher interest rates also raise the monthly carrying costs of homeowning, which can leave households income constrained to the point that they cannot afford homeownership. As a result, many nonprofit lenders and state housing finance agencies offer these loans at below-market interest rates. Also, these lenders are more likely to be flexible about deferring payments in the event of temporary hardships.

Figure 2 shows the source of second mortgages from the nearly 20,000 first-time, low-income home buyers aided by the Neighborhood Reinvestment Corporation's NeighborWorks® Campaign for Homeownership from 1998 to 2000. Nearly $1.3 billion in private lender first mortgages have been leveraged by $46 million in second mortgages, originated primarily by nonprofit revolving loan funds. A benefit to fully amortized loans, as opposed to direct subsidies, grants or forgivable loans discussed above, is that most of this capital will be recycled for use by another generation of homebuyers in the future.

The sources of revolving loan funds include federal grants through the CDFI (Community Development Financial Institutions) Fund, Neighborhood Reinvestment Corporation, as well as local allocations of HOME, Community Development Block Grant (CDBG) and the Affordable Housing Program (AHP) of the Federal Home Loan Banks. Investors also provide below-market rate capital to these loan pools, particularly state housing finance authorities, insurance and pension funds, and other institutions with a long-term horizon and public focus.

One emerging vehicle for second mortgage capital is the equity equivalent investment, often called an "EQ2." These investments are structured as a long-term, deeply subordinated loan to a nonprofit, with features that make it function like equity (a good analogy is to a investment like a preferred stock). Financial institu-

Table 5

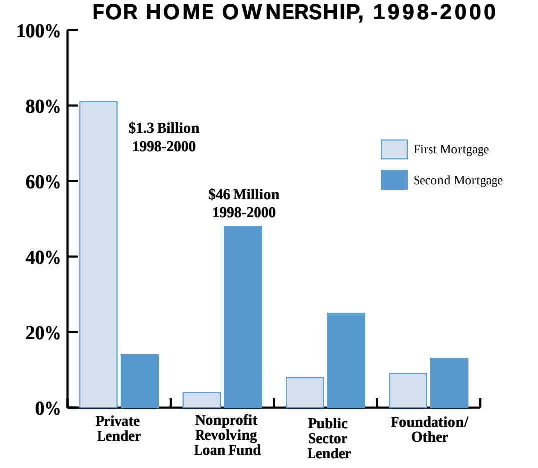
FIRST-TIME HOME BUYERS USING A SECOND MORTGAGE, 1995-1998

	Percent using Second Mortgage	Median Value of Home Purchased	Median Income of Buying Household
San Francisco	10.1%	$300,000	$72,880
San Jose	9.1%	$285,000	$75,600
Oakland	8.4%	$182,000	$68,000
Washington DC	6.3%	$149,000	$65,000
Baltimore	4.8%	$110,000	$52,000
Tampa	4.4%	$72,000	$37,000
Providence	4.1%	$110,000	$54,601
Salt Lake City	3.8%	$125,000	$44,150
Minneapolis	3.3%	$103,000	$45,000
Nortfolk, Newport News	3.0%	$90,000	$42,000
Boston	2.7%	$160,000	$60,000
Cincinnati	2.5%	$91,000	$46,000
Birmingham	2.1%	$75,000	$40,000
Houston	2.0%	$76,000	$51,500
Rochester	1.8%	$80,000	$41,000

Source: Author's tabulations of 1995-1998 Metro American Housing Survey
Based on number of mortgages variable, excluding home equity loans

Figure 2

MORTGAGES IN NEIGHBORWORKS® CAMPAIGN FOR HOME OWNERSHIP, 1998-2000



Savings Incentive Program of FHLB of New York

The Federal Home Loan (FHLB) of New York's First Home Club will match with $3 every $1 that an eligible family deposits in a special First Home Club account. The combined funds then go toward down payment and closing costs for buying a home. Rural Opportunities, Inc. (ROI) teamed up with First Federal Savings and Loan Association of Rochester and funding from the FHLB of NY. First-time homebuyers can receive up to $5,000 in matching funds under the incentive program. Eligible participants must have household incomes below 80% of area median. Participants must also successfully complete home-ownership counseling.

tions receive enhanced lending credit under the Community Reinvestment Act (CRA). The investment is treated as a form of fully subordinated secondary equity capital, and considered a general obligation of the nonprofit organization not secured by any assets. The lender can not accelerate payments-unless the organization ceases operations, and the interest rate is not tied to any income generated by the organization. EQ2's rolling term results in an indeterminate maturity, but interest payments are required during its term, although at a rate well below market rates. The bank is entitled to claim a pro rata share of the incremental loans by the organization in which the bank has invested. While still being evaluated in treatment by regulators and under GAAP (Generally Accepted Accounting Principles), EQ2 represents a promising new source of lending capital for second mortgages.

The Supply Gap

Given existing subsidies and mortgage products, many low-income renter households may be in a position to overcome the wealth and income constraints to buying a home. However, households may still be constrained by a lack of adequate housing units at an appropriate sales price in a desirable location. Stegman, Quercia and McCarthy (2000) use 1998 Metropolitan American Housing Surveys to find a severe shortage of units priced so that working families can afford them in 17 MSAs. The authors found 200,000 working families in these cities could afford to buy a home, but only 30,000 units were actually for sale in their price range.

Simplistically, there are three modes through which additional affordably-priced units may be added to the housing stock:

1. New units are built at affordable price levels (with or without subsidy), or mobile units are placed, or existing ownership units are subdivided into lower-priced ownership units (such as condominiums or cooperatives).

2. Units decline in value ("filter down") due to deteriorating unit or neighborhood conditions, as well as changes in metropolitan-wide demand for housing relative to changes in the supply.

3. Rental units are converted to homeownership units at affordable price levels.

The supply of owner-occupied homes affordable to low-income households (see appendix for methodology used to estimate affordable units) fell from 1997 to 1999. *Table 6* shows a net 1.7 million affordable owned units became unaffordable because of increases in value, and a net 153,000 switched from affordable ownership units to rental units. Meanwhile, 157,000 affordable homeownership units became vacant, while 540,000 new were added. In total, there were about a half-million fewer affordable owner-occupied homes in 1999 than in 1997.

1. Affordable New Units Added:

Approximately 30 percent of units built in the last 2 years *(Table 7)* are valued in a range that would be affordable to a household earning 80 percent or less of

Table 6

AFFORDABLE OWNER-OCCUPIED UNITS, 1997-1999

	Units (000)
1997 Affordable Owner-> 1999 Not Affordable Owner	5,675
1997 Not Affordable Owner-> 1999 Affordable Owner	3,987
Net Filtering	**(1,689)**
1997 Affordable Owner-> 1999 Rental	1,247
1997 Rental-> 1999 Affordable Owner	1,400
Net Conversion from Rental	**153**
1997 Affordable Owner-> 1999 Vacant	1,152
1997 Vacant-> 1999 Affordable Owner	995
Net Conversion from Vacant	**(157)**
GRAND TOTALS	
1997 Affordable Owner-> 1999 Affordable Owner	**20,650**
1999 New Units Added at Affordable Values	540
Net Filtering	(1,689)
Net Conversion from Rental	153
Net Conversion from Vacant	(157)
Total 1999 Affordable Owner Occupied	**19,498**

Source: 1997 and 1999 American Housing Surveys area median income. While this is less than the 45 percent affordable share among existing units, it does represent over a half million units added to the affordable stock. Yet, 375,000, or 69 percent, of these newly added units are actually are mobile units (also called "manufactured homes," these units, if built after 1976, are built around a chassis and have a seal from the U.S. Department of Housing and Urban Development certifying the unit meets national uniform housing code requirements). Thus, mobile units represent almost all affordable units being added to the housing stock in recent years. Alarmingly, two-thirds of these mobile units do not include ownership of land—and therefore lack the asset-building aspects typically ascribed to homeownership.

higher-value owner-occupied units. Eggers and Burke (1996) simulate demand for homeownership, projecting central cities in the U.S. would require 1.4 million owner-occupied units in the 1990's. The authors also found 3.7 million single family rental units existed in these same areas which could be converted to homeownership. The authors assert there would not be a supply constraint limiting the projected central city homeownership boom if these units are allow to change tenure. Yet, *Table 6* shows while 2.3 million rental units were converted to homeownership, only 1.4 million were affordable, and meanwhile 1.3 million affordable owner units were converted to rentals. On net, this does not appear to be a significant source of supply.

Table 7

OWNER OCCUPIED UNITS BY YEAR BUILT AND MOBILE HOME TYPE, 1997-1999

	2 or More Years Old			Built Last 2 Years			Total		
	All	All Mobile	Mobile-No Lot	All	All Mobile	Mobile-No Lot	All	All Mobile	Mobile-No Lot
Above Affordable	37,109,850	98,750	10,772	1,289,696	14,280	5,304	38,399,546	113,030	95,178
Affordable	29,840,275	5,159,798	2,547,995	540,230	375,257	251,498	30,380,505	5,535,055	2,720,889
Total	66,950,125	5,258,548	2,558,767	1,829,926	389,537	256,802	68,780,051	5,648,085	2,816,067
Affordable as % of total	44.6%	98.1%	99.6%	29.5%	96.3%	97.9%	44.2%	98%	97%

Source: 1999 American Housing Survey

2. Units Filtering Down:

Affordable units from the 1997 American Housing Survey can be matched to units in the 1999 Survey to analyze how units filter up and down in value over time. Nearly 4 out of 5 of the units affordable to low-income households in 1997, remained affordable in 1999. Meanwhile, 13 percent of units valued above affordable levels in 1997 became affordable by 1999 *(Table 6)*. But, even more units increased in value, or filtered up. A net 1.7 million owner-occupied homes became unaffordable because of changes in value.

Overall, dependence on filtering down and conversions may be a precarious strategy to create affordable units for low-income homebuyers. Units that filter down, by definition, have depreciated and are more likely to require significant repair and maintenance costs low-income households may not be able to afford.

3. Rental Units Converted to Affordable Ownership:

Table 8 shows affordable units converted from rental to ownership. Of these units, 56 percent were detached single family units in 1997. Units converted to affordable ownership units are also much smaller in size than units converted to

Clay (1992) argued the filtering down process no longer works effectively as new housing construction has not produced enough units to keep up with the shortage of affordable units created since the 1980s. Malpezzi and Green (1996), however, use metropolitan American Housing Surveys from the 1970's and 1980's to compare the growth in new substandard units (as defined by Thibodeau 1992) to the growth in new construction (measured by building permits). Their results show if new units equal 1.4 percent of the existing stock, for example, the number of lower-priced, substandard units will

Table 8

UNITS CONVERTED BETWEEN RENTAL AND OWNERSHIP, 1997-1999

Transition	Units (000)	% Single Family Detached	Mean Square Footage
1997 Rental-> 1999 Affordable Owner	1,400	56%	1,350
1997 Rental-> 1999 Not Affordable Owner	993	75%	1,964
1997 Affordable Owner-> 1999 Rental	1,247	58%	1,406
1997 Not Affordable Owner-> 1999 Rental	601	74%	1,857

Using 1997 weights
Source: 1997-99 American Housing Survey and authors' calculations

increase 2.5 percent. Malpezzi and Green conclude that to the extent any new unit is added to the housing stock, regardless of its price or value, it will enhance the affordability of the low-cost stock by promoting downward filtering. This has not been examined for the owner-occupied stock, which experiences lower turnover rates and higher transaction costs, however.

Several researchers have examined the supply side constraints placed on new construction by strict building codes, approval delays, low-density zoning laws and impact fees (Gyourko and Linneman 1993; Wachter and Schill 1995; Obrinsky 1989). The Advisory Committee on Regulatory Barriers to Affordable Housing (1991), found code regulation and enforcement prevents housing units from filtering to more affordable levels by enforcing a minimum level of housing quality, truncating the filtering process. Malpezzi and Green (1996) explore excessive regulation as a possible reason that the supply of units at the bottom of the U.S. housing market is constricted. The authors do not find evidence of regulation directly impacting tenure choice, but do find increasing housing regulations increase homeownership costs relative to renting. Overall Malpezzi and Green conclude movement from a lightly-regulated environment to a heavily-regulated one decreases homeownership rates by 10 percent. Vandell (1994) created an index of regulatory barriers for selected metropolitan areas, one of several efforts well-documented by Malpezzi (1996).

Table 9

VALUE PER SQUARE FOOT FOR ONE-TENTH TO ONE-QUARTER ACRE LOTS, 1999		
Median Value Per Square Foot	All Owner-Occupied Units Built Last 2 Years	Units Built Last 2 Years-Excluding Mobiles
Central City	**$84.2**	**$88.2**
Suburb	**$70.6**	**$86.6**
Non-Metro	**$74.0**	**$79.2**

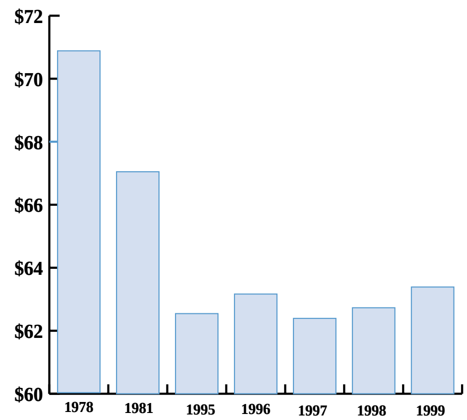
Source: 1999 American Housing Survey.
Mobile units without land ownership excluded

Table 9 show the median value per square foot of units built from 1997 to 1999 nationally, restricted to units on lots of a similar size, including and excluding mobile units (where land is owned). Costs in central cities are consistently higher. Although the factors behind such a difference are not clear from the data, it is likely a combination of increased regulatory and development costs contribute to this difference.

Interestingly, median cost per square foot of single-family units has been declining for the last 20 years, due to a combination of economies of scale (houses are larger) and technology *(Figure 3)*. Yet, these savings do not appear to have contributed to an increase in the cost-effective provision of affordable single family units.

Figure 3

MEDIAN COST PER SQUARE FOOT FOR NEW SINGLE FAMILY HOMES SOLD
in 1999 Dollars



Source: National Association of Home Builders
September 2000 Housing Economics

Bridging the Supply Gap

Development Subsidy: Many municipalities use federal grant programs, such as HOME or CDBG, or more rarely, local bond issuances, to subsidize the development of affordable homes, either directly or through low-cost construction and permanent financing. These resources are limited, however, and must serve many other purposes as well. Many smaller cities and rural areas lack the scale and resources to pursue direct development subsidies.

There are several home improvement and housing rehabilitation programs that help improve the quality of existing vacant units, or to convert rental units to ownership, including CDBG, HOME, HOPE VI, Historic Tax Credits, 203k and Title I. Many of these programs, however, only serve to promote upward filtering of units, which does not directly aid families seeking affordable ownership opportunities. Other programs are targeted to specific populations, but require large subsidies as units are typically sold below total development cost.

Tax Credits: While little used for homeownership, the Low-Income Housing Tax Credit (LIHTC) has proven to be a successful way to raise private equity for investment in affordable rental housing. By providing 10 years of tax credits in exchange for equity investments in the acquisition, development or rehabilitation of affordable housing, the LIHTC has created an incentive to supply nearly one million rental units to lower-income households. Developers of affordable housing competitively sell tax credits to investors who can use credits to offset their tax liabilities. The equity raised from selling credits reduces debt required to finance a project. By reducing annual debt service payments, the LIHTC allows apartments to be rented at below-market rates. Tax credits provide competitive returns to investors and help produce affordable housing that otherwise would not be economically viable.

While primarily a multifamily rental program, the LIHTC has been used on a limited scale for homeownership through lease-purchase programs. Under the LIHTC, homebuyers actually lease their property for the first 15 years of the project. In the 15th year, the tenant has the option to purchase the home at a discounted price. Under lease-purchase, homebuyers are tenants for 15 years before they become owners, and developers act as property managers. The 15-year period has proven to be too long for both the developer and lessee. Fewer than 1,000 homeownership units have been developed using the LIHTC.

Regulatory Relief: Another strategy used by localities is to reduce development costs by relaxing regulations and code levels. Programs that utilize federal or state funds must content with lead-based paint abatement requirements, energy-efficiency and sound-proofing rules, historic preservation guidelines, and accessibility provisions. Each of these increase the time and cost of producing affordable units. When local regulators can expedite approvals, or when codes can be modified, affordability may be enhanced.

A few communities require inclusionary zoning, which requires a portion of new developments to include low-income units. Developers often comply in order to receive expedited approvals or increased density ratios. To the extent development is concentrated, such developments can spread fixed costs over higher costs units, reducing the price required to break-even on affordable units.

Sweat and Shared Equity: Programs such as Habitat for Humanity, and RHS and HUD's self-help homeownership use buyer's sweat-equity and voluntary labor to reduce the development costs of units. Yet, as successful as these programs have been at helping families and communities, their impact on the housing stock has been marginal due to higher administrative costs and a limited scale. In communities with rapidly increasing real estate values, land trusts and limited equity cooperatives are a way in which shared ownership and appreciation can assure affordable units will remain in the market. However, while such developments are effective at preserving units, their limited scale does not allow for an increase in affordable ownership units as demand rises.

Revitalization Zones: One difficulty in many markets is that development costs exceed appraised values. The resulting loans on these units exceed the 105 percent maximum loan-to-value ratios used in automated underwriting systems. While purchase-rehabilitation loans offer increased ratios, many community developers cite undervalued appraisals as the real barrier. Appraisers do have the option in appraisal reports to use a cost basis as opposed to a comparable sale basis. Several mortgage lenders have agreed to use a cost basis in lending in targeted areas that have a commitment to revitalization, where public sector resources are committed going forward, and where the concentration and scale of re-development is likely to support increasing real estate values. When backed by the secondary market, some areas have found market values do increase towards total development costs.

Manufactured Homes: Most of the new units added to the affordable owner-

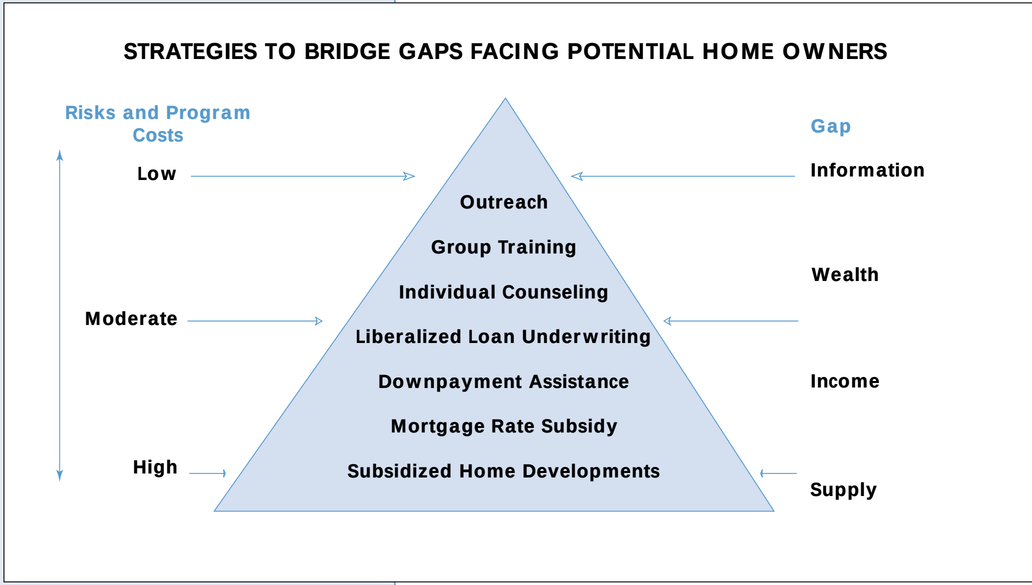
First-Time Home Ownership Plus Rehabilitation Programs

The Manchester Neighborhood Housing Services (NHS) and the New Hampshire Housing Finance Authority (HFA) formed a partnership early in the NHS's development to find a way to help first-time homebuyers within a severely depressed market, where cost of rehabilitation far exceeds market value. The HFA agreed to a set-aside of first-mortgage funds with no mortgage insurance requirement and expanded underwriting criteria. The HFA also contributes to a second-mortgage pool at five percent with seven local lenders. The seconds can go up to 120% combined loan-to-value. Additional subsidy has been obtained by the NHS from both HOPE 3 funds and CDBG to further finance the rehabilitation, causing many of these loans to include third and fourth mortgages. The willingness of the HFA to participate in such innovative financing is a key to the neighborhoods' revitalization efforts.

occupied stock in recent years have been mobile or "manufactured" homes. Because mobile units are built at a low-cost, they are a viable source of affordable units. Yet, two-thirds of mobile units do not include ownership of the land the occupied by the unit. Even when land is included, it is not clear that mobile units are as durable as stick-built units, however. Nevertheless, mobile units deserve careful consideration as for their ability to increase homeownership opportunities.

Figure 4 highlights the costs and targeted gaps of the some of the strategies addressed in this paper. In addition, we provide the following observations:

Figure 4



- Counseling is an essential part of any strategy to reach underserved homebuyer markets.
- We need to find better ways of supporting the development of standards for homeowner education and counseling, providing quality control mechanisms and building sustainable funding. Government sponsored enterprises (GSEs) and FHA could enhance the scale of this market by requiring first-time buyers to take such training.
- Attempts to increase the sustainability of counseling programs should not increase costs to homebuyers, which could increase wealth or income gaps facing potential buyers.
- We need recognize the complementary nature of wealth-building strategies for lower-income households, such as IDAs and financial literacy programs, which serve to decrease gaps for the next generation of first time buyers, as well as to promote well-prepared buyers who will achieve and maintain homeownership.
- Second mortgages are an ideal way to balance income and wealth gaps, but appropriately-priced source capital is scarce. State and national, public and private investors should seek instru ments through which they can invest-in second mortgage loan pools.
- In order to close the supply gap, we should look more carefully at mobile and manufactured homes to assure that these good housing choices for buyers (building equity, providing stability, etc.).
- We need to strengthen programs that can assist with the rehabilitation of lower-end housing stock for affordable homeownership opportunities. Since these units are likely to carry potentially high maintenance costs, and are also likely to filter up once improved, a new strategy may be called for to develop affordable units, such as a development tax credit targeted to first-time, low-income borrowers.
- *Table 10* highlights the wide variation among markets, and therefore appro priate strategies, across the nation. Each market faces varying gaps in incomes and supply. No one policy or approach can meet these diverse needs. Rather, a menu of customizable strategies is required. *Table 11* attempts to begin to develop such a menu, but this process requires the attention of policy makers and practitioners.

Table 10

HOMEOWNERSHIP, AFFORDABILITY, NEW AND EXISTING UNIT VALUES AND MEDIAN INCOMES

MSA (year of survey)	Home Ownership Rate	Percent of Units Affordable for Low Income Buyers	Mean Value-New Units (built previous two years)	Median Income All Households	Income Required for 8% 30-year 97% LTV Mortgage
Salt Lake City (1998)	74%	24%	$175,000	$41,700	$45,293
Minneapolis (1998)	73%	41%	$170,000	$45,020	$43,999
Pittsburg (1995)	72%	48%	$160,000	$28,920	$41,411
Tampa (1998)	71%	39%	$140,000	$28,500	$36,235
Saint Louis (1996)	70%	48%	$160,000	$32,540	$41,411
Birmingham (1998)	70%	50%	$145,000	$34,000	$37,529
Rochester (1998)	70%	26%	$130,000	$36,000	$33,646
Baltimore (1998)	69%	30%	$170,000	$40,000	$43,999
Indianapolis (1996)	67%	48%	$125,000	$35,660	$32,352
Kansas City (1995)	67%	50%	$142,000	$33,000	$36,752
Cincinnati (1998)	67%	34%	$135,000	$35,500	$34,941
Cleveland (1996)	67%	34%	$225,000	$32,500	$58,234
Charlotte (1995)	67%	45%	$125,000	$33,000	$32,352
Oklahoma City (1996)	66%	54%	$116,000	$29,400	$30,023
Hartford (1996)	66%	21%	$210,000	$40,000	$54,352
Denver (1995)	65%	27%	$185,000	$36,000	$47,881
Memphis (1996)	65%	48%	$118,000	$31,000	$30,541
Portland OR (1995)	65%	22%	$174,000	$34,000	$45,034
Washington DC (1998)	65%	32%	$200,000	$55,200	$51,764
Atlanta (1996)	63%	46%	$138,000	$40,000	$35,717
Providence (1998)	63%	13%	$180,000	$35,000	$46,587
Nortfolk, Newport News (1998)	63%	30%	$145,000	$35,000	$37,529
Seattle (1996)	62%	15%	$210,000	$39,000	$54,352
Columbus (1995)	62%	42%	$135,000	$33,000	$34,941
New Orleans (1995)	61%	32%	$105,000	$26,000	$27,176
Sacramento (1996)	61%	17%	$184,000	$35,320	$47,623
San Antonio (1995)	61%	52%	$105,000	$28,000	$27,176
San Jose (1998)	61%	10%	$450,000	$55,500	$116,468
Miami (1995)	61%	21%	$175,000	$26,000	$45,293
Boston (1998)	60%	15%	$280,000	$45,000	$72,469
Oakland (1998)	59%	13%	$300,000	$47,000	$77,646
Houston (1998)	59%	45%	$144,000	$38,000	$37,270
San Francisco (1998)	49%	5%	$375,000	$46,000	$97,057

Source: 1995, 1996 and 1998 Metro American Housing Surveys; Mortgage payment-income ratio of 33%

Table 11

STRATEGIES TO FILL GAPS FRUSTRATING LOW-INCOME POTENTIAL HOME BUYERS

Stategy	Policy/Program	Constraint Addressed
Below-Market Rate Mortgages	Mortgage Revenue Bonds	Income
Amortizing Piggyback Second Mortgages	Revolving Loan Fund	Wealth
Direct Housing Payment Subsidy	Section 8 Vouchers for Home Ownership	Income
Housing Payment Subsidy Through Tax Code	Mortgage Interest Deduction	Income
Downpayment Grants and Gifts	Individual Development Accounts (IDAs)	Wealth
Relaxed Underwriting Standards	Fannie Mae Community Lending Freddie Mac Affordable Gold	Wealth/Income
Home Buyer Education	NeighborWorks® Full-Cycle Lending U.S. Department of Housing and Urban Development Housing Counseling	Information
Mortgage Insurance	FHA or private mortgage insurance	Wealth
Construction/ Development Subsidy	Low Income Housing Tax Credit; HOME, CDBG	Supply
Substantial Rehabilitation Subsidy	203k rehab loan insurance; HOME CDBG	Supply

Data Sources:
Home Mortgage Disclosure Act (HMDA) data collected by the Federal Financial Institutions Examination Council (FFIEC), contains data on many home mortgage loans nationally, including applicant race, income and the Census tract of the property being financed. Issued annually, these data are also timely. However, HMDA data does not capture the full universe of home mortgage loans, lacks data on home value, and is at best an approximation of demand for mortgages rather than the supply of owner-occupied housing units.

The American Housing Survey (AHS) is published by the U.S. Bureau of Census in conjunction with the Department of Housing and Urban Development using the same sample of housing units in the U.S. every two years. The AHS tracks a panel of units over time, collecting over 500 data points on the unit and its current occupants. A problem with the national AHS, however, is that sample sizes are too small at the metro level, and no smaller areas are available for analysis. Despite its lack of specific geographic locations, because AHS data allow units to be tracked over time, and provide rich detail from recent time periods survey, it is most useful for this analysis.

The 1995, 1996 and 1998 Metropolitan AHS contains most of the variables in the national AHS, but also identifies smaller sub-market areas called “zones,” of roughly 100,000 people each, depending on the city. Combined, the 1995-1998 data contain 33 metropolitan areas and 378 zones.

The AHS asks owner-occupants to estimate the market value of their home, or, in the case of vacant units, uses the asking price for the unit. Previous analyses show that market value estimates by occupants are generally unbiased (Kain and Quigley 1972; Thibodeau 1982—cited in Gyourko and Linneman 1993), or may even slightly over-value their homes (by as much as six percent). However, research shows little correlation in this over-estimation to unit or household characteristics (Goodman and Ittner 1992—cited in Gyourko and Linneman 1993). The U.S. Census Bureau conducted a similar, but more thorough, analysis of owner-estimated home values, finding households tend to under-estimate values, but again, consistently across various demographic groups (Walters 1974). Kiel and Zable (1999) study the 1978 to 1991 American Housing Surveys to find that the average owner overvalues their home by 5 percent. Although owners who purchased their homes in the last 12 months valued their homes higher, on average, than longer-term owners, but the difference between actual and reported values are not related to particular characteristics of the house, occupants or neighborhood. Since the bias is not systematic, these estimates of values seem reasonable to use in this analysis.

Methodology for Calculating Target Affordable House Values
While the distribution of market shown above values helps describe the supply for homes that might be affordable for homeownership, home market values vary significantly by market. The lower quartile of national home values may actually homes be considered to be relatively higher-priced homes in some lower-cost areas, such as the upstate New York. This analysis can be refined by defining a target affordable price for each market based on local definitions of low-income. In addition, local median property taxes and hazard insurance rates, both of which can cause significant differences in affordability across the nation, can be estimated for each metropolitan area.

This analysis seeks to determine a target affordable value for each MSA, and then group all owner-occupied units as either affordable to a family earning 80 percent of the area median income, or not affordable. In general, mortgage underwriters allow a maximum housing payment (which includes the mortgage principal and interest, property taxes and insurance, or PITI) to income ratio. We assume a conventional, conforming loan underwriting ratio of 28 percent of income for housing payment, as well as a downpayment of 10 percent of the house price.

Because taxes and insurance are based on house prices, and affordable house values are based on 80 percent of U.S. Department of Housing and Urban

Development estimated area median incomes, a formula must be used to calculate the ratio of mortgage principal and interest to income for each metropolitan area, while still preserving a 28 percent maximum total ratio. The share of income allocated to the mortgage principal and interest payment was calculated for each metro area, and in non-metro or suppressed metro areas, for each region, by metro status.

The formula used to derive the mortgage principle and interest payment to income ratio is as follows:

L= Loan to Value Ratio (assumed to be 90%)

K= Mortgage Constant (annual for 360 payment, 30 year fixed rate loan, see Table 12)

R= Maximum Housing to Income Ratio (assumed to be 28% = principal, interest, taxes, & insurance / income)[5]

P = area median property tax as a percent of median property value (calculated by MSA as median AMTX/ median VALUE)

H = area median property hazard insurance as a percent of median property value (calculated by MSA as median AMTI/ median VALUE)

I = 80% * Income (area median income as provided by HUD, using 80% as low -income cutoff)

X = Principle and interest payment to income ratio (variable due to local income, taxes and insurance)

$$RI = \frac{P(XI)}{LK} + \frac{P(XI)}{LK} + XI \Rightarrow LKR = PX + HX$$

$$+ XLK \Rightarrow LKR = X(P + H + LK)$$

$$X = \frac{LKR}{(P+H+LK)}$$

The mortgage constant is calculated using a monthly payment for a 30 year, fixed rate mortgage in the year of each survey using effective interest rates calculated from contract rates published by the Federal Home Loan Mortgage Corporation. The effective interest rates and mortgage constants used in this analysis are shown in Table 12:[6] The 10 percent downpayment assumed in this analysis might require mortgage insurance until the equity in the home increases 20 to 30 percent of the house price. This analysis does not include mortgage insurance, however.

Table 12

EFFECTIVE INTERESTE RATES AND MORTGAGE CONSTANTS, 1995-1999

Year	Contract Interest Rate	Points	Total Effective Rate	Annual Mortgage Constant
1995	**7.9%**	**1.8%**	**8.19%**	**0.0897**
1996	**7.8%**	**1.7%**	**8.06%**	**0.0889**
1997	**7.6%**	**1.7%**	**7.86%**	**0.0872**
1998	**6.9%**	**1.1%**	**7.09%**	**0.0806**
1999	**7.4%**	**1.0%**	**7.58%**	**0.0847**

Freddie Mac Primary Mortgage Market Survey

[5] 28 percent is used to be consistent with FHA standard underwriting guidelines

[6] Mortgage Constant = PV[interest rate / 1-{1 / (1 + interest rate) ^{360}}]^{12}, for a 30 year mortgage at an annual interest rate with 12 equal payments annually.

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This publication, produced by the LISC Center for Home Ownership and the LISC Knowledge Sharing Initiative, is one in a series of three publications created as part of the Center's annual Home Ownership Summit. For the Summits, the Center for Home Ownership brings together experts in the housing industry to define emerging issues in the field of home ownership, discuss the impact of these issues on community renewal activities, and identify strategies to address the issues at the policy and practitioner levels. Summit 2000 explored the benefits and costs of home ownership, with a focus on: the role of home ownership in gentrifying neighborhoods; emerging gap financing strategies; and the impact of current underwriting policies and practices on low-income borrowers and neighborhoods. The Summit publications will be available on the LISC Online Resource Library at www.liscnet.org/resources.

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